



766.21 CIP

PATENT APPLICATION

03CQ1  
Box/seq.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

are Application of:

TETSUYOSHI ISHIWATA et al.

Application No : 09/730,559

Filed: December 7, 2000

For: IgA NEPHROPATHY-RELATED  
GENES

Examiner: N/Y/A

Group Art Unit: N/Y/A

August 3, 2001

Commissioner for Patents  
Washington, D.C. 20231

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This is in response to the Office Action mailed July 10, 2001 (copy attached). Applicants submit herewith a substitute computer readable form under 37 C.F.R. § 1.821(e). The content of the computer readable form and the Paper Copy of the Sequence Listing filed herewith are the same. No new matter has been added.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,

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APPLICATION NUMBER	FILING/RECEIPT DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NUMBER
09/730,559	12/07/2000	Tetsuyoshi Ishiwata	766.21 CIP

CONFIRMATION NO. 9523

FORMALITIES LETTER



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05514  
FITZPATRICK CELLA HARPER & SCINTO  
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Date Mailed: 07/10/2001

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Applicant is given **TWO MONTHS FROM THE DATE OF THIS NOTICE** within which to file the items indicated below to avoid abandonment. Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

- A copy of the "Sequence Listing" in computer readable form has been submitted. However, the content of the computer readable form does not comply with the requirements of 37 C.F.R. 1.822 and/or 1.823, as indicated on the attached copy of the marked -up "Raw Sequence Listing." Applicant must provide a substitute computer readable form (CRF) copy of the "Sequence Listing" and a statement that the content of the sequence listing information recorded in computer readable form is identical to the written (on paper or compact disc) sequence listing and, where applicable, includes no new matter, as required by 37 CFR 1.821(e), 1.821(f), 1.821(g), 1.825(b), or 1.825(d).

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*Ngan*



#7

## SEQUENCE LISTING

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 ctccagcgtg ggcaacagag tgagaccctg tttctaaaag aaagaaagaa aaaagggtg 3519  
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 aattatagcc accttgaagc tttcaggsc ctttctaccc tgaattaaca gtgacattgg 3639  
 accagtcttc tctttacttc ttatcttaaa atacccccaa aaccagaatg agttgattca 3699  
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 aagtggagtt tcacaattat ctatagttga tcgaactaca atagcaaaca tgtgtccgga 3939  
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 aatattttat aaattactac cttatccatg ttatttacta ctacaaaaat tacattatgt 4119  
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 ctagttccct gtgacacatt gaaagcaatt taaaggaatt attcaaacca ttgatcctga 4239  
 cttgactgtt tcccataatg atggatacct cccctctac ttaggggtca taggtgcaat 4299  
 ttaatggagt cagcccttaa acatattcac agcagtcctt ttct 4343



<211> 155  
<212> DNA  
<213> Homo sapiens

<400> 8  
cacttataaa atggttagggc ttaatattat tcatagatcg aggatagttt cattcttagt 60  
  
cgccctcctta gtcactcttc ctataccaat ctgagaccat tttacaattt agaaaagaca 120  
  
aataactggt tgggttactt gatagtataa taacc 155

<210> 9  
<211> 278  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> (29), (32), (35)  
<223> A or G or C or T

<400> 9  
gaaggagaat atgaagaggt tagaaaagnt cnggnttctg ttggtgaaat gaaggatgaa 60  
  
ggggaagaga cattaaatta tcctgatact accattgact tgtctcacct tcaaccccaa 120  
  
aggtccatcc agaaattggc ttcaaaagag gaatcttcta attctagtga cagtaaatca 180  
  
cagagccgga gacatttgct agccaaggaa agaagggaaa tgaaaaagaa aaaacttcca 240  
  
agtgactcag gagattttaga agcgtttagag ggaaagga 278

<210> 10  
<211> 135  
<212> DNA  
<213> Homo sapiens

<400> 10  
 ttctgacaat gagtaagaag aaagaggggc ttgccctttg gttattaaga tttatcatag 60

agcaataata astaaatcgg tggtatacca gcacagagat tagacaaata aaccaaggga 120

ctggactaaa taagc 135

<210> 11  
 <211> 197  
 <212> DNA  
 <213> Homo sapiens

<400> 11  
 atggtacca gtttcaaatt aacatggta ttttacttgt gttcccaaat ttaacattag 60

ggaatTTTTg gttgtggggtc tggtatcact agaaaaatat atatattggt gctgaagata 120

atTTtgagat aattagacaa gacagtttag catttacaag aacaagTTtg gcagttgaag 180

aatctattta tatgact 197

<210> 12  
 <211> 137  
 <212> DNA  
 <213> Homo sapiens

<400> 12  
 ccaccgcacc tggctgatgc ttttctatct gacttctttc agaggaccct gaaagacact 60

aagtggaatc tttccttgaa gtcttccaag ctaaaacaat tctctggaaa gatcacctct 120

gttcagtcct ggtctct 137

<210> 13  
 <211> 274  
 <212> DNA  
 <213> Homo sapiens

<400> 13  
 cgtttacaga ttctcttgcg gctggcggtg gaactacaaa gggatcgggtg cctatatcac 60  
  
 aataccaaac ttgataataa tctagattct gtgtytctgc ttatagacca tgtttgtagt 120  
  
 aggtaagagg aaaacttcct atattctgaa acagcctaac attttacaaa attttagttt 180  
  
 tcttttttag agtcttatcc tgtagctata taacagttca tgtctgattt agcatttggt 240  
  
 cacgagtaaa gctggaacta tgaaaattga aaat 274

<210> 14  
 <211> 171  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> (72), (127), (150)  
 <223> A or G or C or T

<400> 14  
 gattaggtga ccttccttga aragccacgg gtttcccata tcgaaatgct attcattacc 60  
  
 cgagtcacct angttcttac aaaggaagcg agaaaattgc ttttgttggg ccatgccctt 120  
  
 tttgcanagg ttccctaagta tagtcgccan aattttttta atggcctaaa g 171

<210> 15  
 <211> 161  
 <212> DNA

<213> Homo sapiens

<400> 15

aggggcgctt gttctgctct cagcagattg gttacacgcg tcaggtggtg gcgatgactt 60

aattcctagc ccaagaagaa tataatgta aaactggta tgtaattttt gtgcctctcc 120

ttttaatgc agtatttagt tcagatggtg gcgatttttc a 161

<210> 16

<211> 323

<212> DNA

<213> Homo sapiens

<400> 16

tataaggwgg gaaccttact atctctaata accttactga tgctgacttt aatactctgt 60

gaaggtaga gttcagtga tgttacctag aaacagcccc ggctgtggaa tactttattc 120

ttagccctat atttgggggt tggatgtcca ctgtgctggt tcccagagat agtaagggga 180

tgagagtatt ggttacatct cctgaccac atacttaaga tccagatgaa caagacagtt 240

ttcactcctg cttggtagaa cctatttgyk shaggaaaca gytctaaag aatgggttcta 300

gccagaccct gtcgytacca gaa 323

<210> 17

<211> 138

<212> DNA

<213> Homo sapiens

<400> 17

agtatgacaa atagtttctg cctgattggt gagatttggg atgggcccc actttgttcc 60

tctttctgca taaaaatttc aacattttta caaaattttc aaaaacttct cctcagtctg 120

tacatctttg ttaatcag 138

<210> 18

<211> 135

<212> DNA

<213> Homo sapiens

<400> 18

tgatccccac aatttcttgt gattgggtgag gaactataaa tgactcccat ccaagcttat 60

accagaaaaa aggagcacat tttctacaaa ttatatcatt tttaatccat taccacatta 120

ttttagggga actac 135

<210> 19

<211> 219

<212> DNA

<213> Homo sapiens

<400> 19

ctgagaggag ccatgtatac aaaccacttt ttctaacatg gtctttatta aactttgaat 60

ataagtacac ctgctcgaag tgttcatcta tattatttaa gaacaagcaa ctgtaaaaca 120

gtaaaatcac aaaaggtaag ttgttggaag acaacaaaaa agaattacta tatctgatcc 180

tgcggtgttta ttttagaatc tgттаатagg cctacagct 219

<210> 20

<211> 191

<212> DNA

<213> Homo sapiens

<400> 20

acagtgagtg tggctgaaac ctaagctgaa ggaagggagg agcaggcact gccatgaggg 60

gtccctggac agaaactctt cagcaggcct tgaagtttag ttcaggggct acatggaata 120

ccactattta gcacacaggt gtgatctgag gtgagggact accttttcga tcttggtttt 180

ctcatttatt t 191

<210> 21

<211> 148

<212> DNA

<213> Homo sapiens

<400> 21

ctggaggtga agggaaggaa agaaaggaaa aactatctac ctggcaggaa aagagataag 60

ctcccaagaa caccaaagca gatgatgagt ctagctctac ccagccttcc tccccacgaa 120

tccagatcat agtaagaaac tctgggct 148

<210> 22

<211> 306

<212> DNA

<213> Homo sapiens

<400> 22

ccaccaccag aatgaacaa aaagcatttt acctaaaaat acaccagcaa aatgtactca 60

gcttcaatca caaatacgac tgcttaaaac cgcagaaatt tcctcaacac tcagccttta 120

tcactcagct ggattttttc cttcaacaat cactactcca agcattgggg aacacaactt 180

ttaatcatac tccagtcgtt tcacaatgca ttctaatagc agcgggatca gaacagtact 240



aatagttaat agctgtatta gccagaaaat ggtgtaagga caacaggcta actaacctg 180

tcacttggtta tgctaaaatt aagtctagat agagtcctc 219

<210> 25

<211> 251

<212> DNA

<213> Homo sapiens

<400> 25

tgaaagggga atagaagcac aagagtcagt aatcaataac aaacaactca aggtgctcct 60

tccttacact ggtgttcccc aaagtgaggt gaattgccag ccactgggag tcagggccag 120

ttacataaga cattctcggt aagccccctt tgggtatccc aaataaggac tgggggtgggt 180

ttatgtgtag tccattatta acaactaaac gaacaaacct agtgaattgc aataaattca 240

caccaacaga a 251

<210> 26

<211> 233

<212> DNA

<213> Homo sapiens

<400> 26

gttgaaagag tccttggaag gcttttagac caaaccctc tgcattgctca arccttgggt 60

acaggatttc taagaagtgg aacagtctcc aggggtgtgg arctcatcgc tcaaggcagg 120

ttatcttata tgaataattt tgtctgttga ctattgggat agttctcctt cagatgagct 180

gaaattttct ccatagcttc ctctattaaa cccaattcca cttctcaggg tca 233



<210> 27  
 <211> 176  
 <212> DNA  
 <213> Homo sapiens

<400> 27  
 caaaagcgct gaagttaagc attaatacgc cagattcatg atttatgatc agtatccaaa 60  
  
 actccaacta caaacaatgc aaagtagtgc tcctcagtat tattttttgca attgttagta 120  
  
 atgttaagca tcaaggaaaa taaaacacat cattgcacat tacagccgca aaaaac 176

<210> 28  
 <211> 241  
 <212> DNA  
 <213> Homo sapiens

<400> 28  
 agagagtaaa gcaagctatt ttgacagcaa cctaataaca gctgtcttct tccacttctt 60  
  
 ggctaactca tccccagat agccttcttt totcttatca attccctggt gcaacaataa 120  
  
 taaatgccac acctgatgga gtcattaggc actttcctag tgacaagtgc ctaggacaga 180  
  
 ggagaaaaca aagaaacact gacaaccact gaaaactgac atatcaggcc aggcattgtca 240  
  
 c 241

<210> 29  
 <211> 217  
 <212> DNA  
 <213> Homo sapiens

<400> 29  
 gctggagagg tggatgatgtt gctgaataat tgcttttttaa agctggaggg gacttccaag 60



<210> 32  
 <211> 298  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> (44)  
 <223> A or G or C or T

<400> 32  
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 atcgcttttt ctgaaatagg tatcccttga tgtcgactat ttgatttcag ccagtcgttt 120  
  
 ctctctggca gtgctccctg caaatgtgtc ctttcaagaa aacaaaacct gcaagtggct 180  
  
 tgtaatgtac catgacctta tcatgtgaag gacaaatggc tcttgtgctt attagatagc 240  
  
 agatgaactg atgaactgaa ttcttggctc gaagctttga taaggtcaga tgtctttg 298

<210> 33  
 <211> 291  
 <212> DNA  
 <213> Homo sapiens

<400> 33  
 acttcgaagg gaaaaagagg aaggaaaagg actgttaata aaataacaaa ggcagcaatc 60  
  
 agaatgaacc agagccagga cagcgtaaag gctaggttca cagtgagatg aaagaacctg 120  
  
 aaaacaagtt taaaactcaa aagaggatta ttctcaagtt atactacagt gaaaaaacat 180  
  
 ggaaaaacac aaaaaggaca ggcaataagg cacaggcata catacaaggc aaattgtaac 240

acaatatttta cttgcaaaaag agcccacaga gacatgtcaa tgaagtcata g

291

<210> 34

<211> 230

<212> PRT

<213> Homo sapiens

<400> 34

Met Glu Asp Gly Phe Leu Asp Asp Gly Arg Gly Asp Gln Pro Leu His  
1 5 10 15

Ser Gly Leu Gly Ser Pro His Cys Phe Ser His Gln Asn Gly Glu Arg  
20 25 30

Val Glu Arg Tyr Ser Arg Lys Val Phe Val Gly Gly Leu Pro Pro Asp  
35 40 45

Ile Asp Glu Asp Glu Ile Thr Ala Ser Phe Arg Arg Phe Gly Pro Leu  
50 55 60

Ile Val Asp Trp Pro His Lys Ala Glu Ser Lys Ser Tyr Phe Pro Pro  
65 70 75 80

Lys Gly Tyr Ala Phe Leu Leu Phe Gln Asp Glu Ser Ser Val Gln Ala  
85 90 95

Leu Ile Asp Ala Cys Ile Glu Glu Asp Gly Lys Leu Tyr Leu Cys Val  
100 105 110

Ser Ser Pro Thr Ile Lys Asp Lys Pro Val Gln Ile Arg Pro Trp Asn  
115 120 125

Leu Ser Asp Ser Asp Phe Val Met Asp Gly Ser Gln Pro Leu Asp Pro  
130 135 140

Arg Lys Thr Ile Phe Val Gly Gly Val Pro Arg Pro Leu Arg Ala Val  
145 150 155 160

Glu Leu Ala Met Val Met Asp Arg Leu Tyr Gly Gly Val Cys Tyr Ala  
165 170 175

Gly Ile Asp Thr Asp Pro Glu Leu Lys Tyr Pro Lys Gly Ala Gly Arg  
180 185 190

Val Ala Phe Ser Asn Gln Gln Ser Tyr Ile Ala Ala Ile Ser Ala Arg

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195					200					205					
Phe	Val	Gln	Leu	Gln	His	Gly	Glu	Ile	Asp	Lys	Arg	Val	Ser	Leu	Ile
210					215					220					
Leu	His	Phe	Gly	Lys	Phe										
225					230										
<210> 35															
<211> 143															
<212> PRT															
<213> Homo sapiens															
<400> 35															
Met	Gly	Ser	Asp	Lys	Arg	Val	Ser	Arg	Thr	Glu	Arg	Ser	Gly	Arg	Tyr
1		5			10					15					
Gly	Ser	Ile	Ile	Asp	Arg	Asp	Asp	Arg	Asp	Glu	Arg	Glu	Ser	Arg	Ser
20				25					30						
Arg	Arg	Arg	Asp	Ser	Asp	Tyr	Lys	Arg	Ser	Ser	Asp	Asp	Arg	Arg	Gly
35			40				45								
Asp	Arg	Tyr	Asp	Asp	Tyr	Arg	Asp	Tyr	Asp	Ser	Pro	Glu	Arg	Glu	Arg
50		55				60									
Glu	Arg	Arg	Asn	Ser	Asp	Arg	Ser	Glu	Asp	Gly	Tyr	His	Ser	Asp	Gly
65		70				75					80				
Asp	Tyr	Gly	Glu	His	Asp	Tyr	Arg	His	Asp	Ile	Ser	Asp	Glu	Arg	Glu
85				90					95						
Ser	Lys	Thr	Ile	Met	Leu	Arg	Gly	Leu	Pro	Ile	Thr	Ile	Thr	Glu	Ser
100			105					110							
Asp	Ile	Arg	Glu	Met	Met	Glu	Ser	Phe	Glu	Gly	Pro	Gln	Pro	Ala	Asp
115			120					125							
Val	Arg	Leu	Met	Lys	Arg	Lys	Thr	Gly	Glu	Ser	Leu	Leu	Ser	Ser	
130		135					140								

<210> 36  
<211> 104  
<212> PRT

<213> Homo sapiens

<400> 36

Met Pro His Met Leu Ser Gln Leu Ile Ala Gly Gly Val Ser Thr Ser  
1 5 10 15

Cys Val Thr Ala Leu Gly Glu Glu Thr Gly Ala Trp Phe Pro Val Tyr  
20 25 30

Leu Ser His Ala Ser Ser Pro Phe Ala Asp Leu Val Phe Cys Pro Phe  
35 40 45

Ala Glu Ile Asn His Ser Gln Glu Tyr Asp Asn Met Arg Gly Pro Val  
50 55 60

Ser Pro Pro Asn Lys Gln Phe Asn Leu Gly Val Ile Phe Gly Ile Pro  
65 70 75 80

Asn Asn Cys Arg Phe Pro Thr Asp Asn Lys Ile Thr Glu Lys Gln Leu  
85 90 95

Leu Gly Asn Val Leu Asn Tyr Pro  
100

<210> 37

<211> 133

<212> PRT

<213> Homo sapiens

<400> 37

Met Asn His Pro Trp His Val Cys Phe Leu Phe Lys Val Leu Arg Tyr  
1 5 10 15

Tyr Pro Thr Ala Pro Ile Leu Lys Trp Thr His Thr Val Ser Cys Ser  
20 25 30

Trp Cys Arg Ser Val Leu Arg Glu Val Val Gly Asn Val Ser Leu Ser  
35 40 45

Glu Asn Phe Thr Ile Ser Ala Phe Cys Pro Glu Leu Thr Pro Phe Pro  
50 55 60

Asp Gln Gly Thr Ser Thr Met Ile Ser Phe Leu Glu Lys Phe Asn Lys  
65 70 75 80

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Ser Lys Arg Glu Arg Leu Glu Leu Met Leu His Phe Tyr Ser Val Leu  
85 90 95

Ser Leu Glu Pro Ala Val Ala Glu His Trp Ser Gly Glu Phe Glu Lys  
100 105 110

Trp Lys Val Gly Phe Phe His Pro Leu Lys Arg Glu Asp Gly Phe Phe  
115 120 125

Thr Arg Thr Asp Ile  
130

<210> 38

<211> 133

<212> PRT

<213> Homo sapiens

<400> 38

Met Asn His Pro Trp His Val Cys Phe Leu Phe Lys Val Leu Arg Tyr  
1 5 10 15

Tyr Pro Thr Ala Pro Ile Leu Lys Trp Thr His Thr Val Ser Cys Ser  
20 25 30

Trp Cys Arg Ser Val Leu Arg Glu Val Val Gly Asn Val Ser Leu Ser  
35 40 45

Glu Asn Phe Thr Ile Ser Ala Phe Cys Pro Glu Leu Thr Pro Phe Pro  
50 55 60

Asp Gln Gly Thr Ser Thr Met Ile Ser Phe Leu Glu Lys Phe Asn Lys  
65 70 75 80

Ser Lys Arg Glu Arg Leu Glu Leu Met Leu His Phe Tyr Ser Val Leu  
85 90 95

Ser Leu Glu Pro Ala Phe Ala Glu His Trp Ser Gly Glu Phe Glu Lys  
100 105 110

Trp Lys Val Gly Phe Phe His Pro Leu Lys Arg Glu Asp Gly Phe Phe  
115 120 125

Thr Arg Thr Asp Ile  
130

0930539.030601





Ala	Val	Arg	Asn	Cys	Asp	Gly	Phe	Leu	Met	Lys	Lys	Glu	Asp	Val	Met
50						55					60				
Asn	Ile	Leu	Asp	Trp	Lys	Thr	Lys	Gln	Ser	Asn	Val	Glu	Val	Pro	Phe
65					70					75					80
Phe	Pro	Ala	Arg	Val	Leu	Leu	Gln	Asp	Phe	Thr	Gly	Ile	Pro	Ala	Met
				85					90					95	
Val	Asp	Phe	Ala	Ala	Met	Arg	Glu	Ala	Val	Lys	Thr	Leu	Gly	Gly	Asp
			100					105					110		
Pro	Glu	Lys	Val	His	Pro	Ala	Cys	Pro	Thr	Asp	Leu	Thr	Val	Asp	His
		115					120					125			
Ser	Leu	Gln	Ile	Asp	Phe	Ser	Lys	Cys	Ala	Ile	Gln	Asn	Ala	Pro	Asn
	130					135					140				
Pro	Gly	Gly	Gly	Asp	Leu	Gln	Lys	Ala	Gly	Lys	Leu	Ser	Pro	Leu	Lys
145					150					155					160
Val	Gln	Pro	Lys	Lys	Leu	Pro	Cys	Arg	Gly	Gln	Thr	Thr	Cys	Arg	Gly
				165					170					175	
Ser	Cys	Asp	Ser	Gly	Glu	Leu	Gly	Arg	Asn	Ser	Gly	Thr	Phe	Ser	Ser
			180					185					190		
Gln	Ile	Glu	Asn	Thr	Pro	Ile	Leu	Cys	Pro	Phe	His	Leu	Gln	Pro	Val
		195					200					205			
Pro	Glu	Pro	Glu	Thr	Val	Leu	Lys	Asn	Gln	Glu	Val	Glu	Phe	Gly	Arg
	210					215					220				
Asn	Arg	Glu	Arg	Leu	Gln	Phe	Phe	Lys	Trp	Ser	Ser	Arg	Val	Leu	Lys
225					230					235					240
Asn	Val	Ala	Val	Ile	Pro	Pro	Gly	Thr	Gly	Met	Ala	His	Gln	Ile	Asn
				245					250					255	
Leu	Glu	Tyr	Leu	Ser	Arg	Val	Val	Phe	Glu	Glu	Lys	Asp	Leu	Leu	Phe
			260					265					270		
Pro	Asp	Ser	Val	Val	Gly	Thr	Asp	Ser	His	Ile	Thr	Met	Val	Asn	Gly
		275					280					285			
Leu	Gly	Ile	Leu	Gly	Trp	Gly	Val	Gly	Gly	Ile	Glu	Thr	Glu	Ala	Val



<400> 42

gaaaccacgg cttacaccta gagacagcat tcagatatag acgggatact tgtgttagtc 60

agttccttta taacaggtga atctctctcc cactgcttca acactgcgtg acaaagccaa 120

ttgggaagca gctttacaaa tgtgacttga cttggggatc ttcttgatac ttgccaatgg 180

caaggaacaa gccgcctgaa ctaaattgcca ctccatttga ttccacgctt aaagtaacca 240

tgcaaccgac tatagt 256

<210> 43

<211> 244

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> (227), (237)

<223> A or G or C or T

<400> 43

tactcttcaa ccatgatattt tctctgatgg cctgtgtgaa cagattaatg gtgtccatct 60

aattccttcc ccactggggg aaagcaaata atcaggccca ttgcaaaaac tgctcttggt 120

tgagcttcct gccttaaata ataccacag tgaatggcgt ccctttatca ccgctaata 180

ctctgacatc tctctccact cacatgtgag cctcctcagc tctcganaaa caagtcngtc 240

tcgg 244

<210> 44

<211> 258

[illegible]

<213> Homo sapiens

 $\langle 220 \rangle$ 

<221> unsure

$\langle 222 \rangle$  (39), (40), (41)

<223> A or G or C or T

<400> 44

tctcagaaaa ctccagatca aatgagatga gtatggtgnn nagggctggc aattagagga 60

tactctccaa tggatgatgaa gggagatgtc tgggggaaat ccagcaggat gttgatttag 120

tatgtacaca gtgagaggat acttgtagag aacctagaat cttctctgaa tgtgacgggc 180

cctcagagat aattgttaac agataagtgg atgattaaat acacttcctc cagtaggcta 240

gatgttaaga cggagatc 258

<210> 45

<211> 26

<212> DNA

### <213> Artificial Sequence

 $\langle 220 \rangle$ 

<223> Description of Artificial Sequence:Synthetic DNA

<400> 45

gggcttaata ttattcatag atcgag 26

<210> 46

<211> 26

<212> DNA

### <213> Artificial Sequence

 $\langle 220 \rangle$ 

<223> Description of Artificial Sequence:Synthetic DNA





<210> 54  
 <211> 25  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:Synthetic DNA

<400> 54  
 gattcttcaa ctgccaaact tgttc

25

<210> 55  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:Synthetic DNA

<400> 55  
 gctgatgctt ttctatctga cttc

24

<210> 56  
 <211> 22  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:Synthetic DNA

<400> 56  
 gaccaggact gaacagaggt ga

22

<210> 57  
 <211> 25  
 <212> DNA  
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Synthetic DNA

<400> 57

gcttatagac catgtttgta gtagg

25

<210> 58

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Synthetic DNA

<400> 58

gtgaacaaat gctaaatcag acatg

25

<210> 59

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Synthetic DNA

<400> 59

gccacggggtt tcccatatcg aa

22

<210> 60

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Synthetic DNA

<400> 60

gactatactt aggaacctct gcaa

24





<400> 64  
ggagtgaaaa ctgtcttggt catc

24

<210> 65  
<211> 25  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:Synthetic DNA

<400> 65  
gtatgacaaa tagtttctgc ctgat

25

<210> 66  
<211> 25  
<212> DNA  
<213> Artificial Sequence

<220>  
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<400> 66  
gattaacaaa gatgtacaga ctgag

25

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<223> Description of Artificial Sequence:Synthetic DNA

<400> 67  
gagacagcat tcagatatag acgg

24

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gcgtggaatc aaatggagtg gc

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gatggcctgt gtgaacagat taat

24

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gagagagatg tcagagtcac tagc

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24

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gttcccctaa aataatgtgg taatg

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23

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<400> 74

gtcttaacat ctagcctact ggag

24

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<400> 75

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24

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gcacgcagga tcagatatag taattc

26

<210> 77

<211> 24

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<400> 77

gctgaaacct aagctgaagg aagg

24

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gtccctcacc tcagatcaca cc

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25

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25

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<400> 82

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24

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26

<210> 84

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<400> 84

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24

<210> 85

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<400> 85

gaggtagggc ttcccttcgc ta

22

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gcataacaag tgacagggtt agtta

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<210> 87  
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ggtgctcctt ccttacactg gt

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<210> 88  
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gactacacat aaacccaccc cag

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<210> 89  
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<400> 89  
gggtacagga tttctaagaa gtgg

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25

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24

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24

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22

<210> 95  
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<210> 96  
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gttacaaaca cacacgaagt tcct

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<400> 98

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22

<210> 99

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gtttaactac ctctcaggtc atga

24

<210> 100

<211> 22

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22

<210> 101

<211> 24

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<400> 101

gaaataggta tcccttgatg tcga

24

<210> 102

<211> 24

<212> DNA

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<223> Description of Artificial Sequence:Synthetic DNA

<400> 102

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24

<210> 103

<211> 22

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<400> 103

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<210> 104  
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22

<210> 105  
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<400> 105  
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21

<210> 106  
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<400> 106  
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23

<210> 107  
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17

<210> 108  
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<400> 108  
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<210> 109  
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<400> 109  
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17

<210> 110  
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<210> 111  
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22

<210> 112  
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<400> 112  
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<210> 113  
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<400> 113  
ttcaccacct tcttgatgtc atcata

26

<210> 114  
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<400> 114

Cys Pro Leu Lys Arg Glu Asp Gly Phe Phe Thr Arg Thr Asp Ile  
1 5 10 15

<210> 115

<211> 16

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<400> 115

Cys Ser Phe Leu Glu Lys Phe Asn Lys Ser Lys Arg Glu Arg Leu Xaa  
1 5 10 15

<210> 116

<211> 15

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<222> (15)

<223> AMIDATION, GlyAmide

<400> 116

Cys Ala Glu His Trp Ser Gly Glu Phe Glu Lys Trp Lys Val Xaa  
1 5 10 15

<210> 117

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Synthetic Peptide

<400> 117

Cys Glu Ile Asp Lys Arg Val Ser Leu Ile Leu His Phe Gly Lys Phe  
1 5 10 15

030906.0000



<210> 118  
<211> 15  
<212> PRT  
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<400> 118  
Cys Arg Leu Met Lys Arg Lys Thr Gly Glu Ser Leu Leu Ser Ser  
1 5 10 15

<210> 119  
<211> 14  
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<400> 119  
Cys Thr Ser Ile Asp Val Val Leu Gly Ile Thr Lys Val Ser  
1 5 10

<210> 120  
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<400> 120  
Cys Ser Ala Glu Thr Ala Pro Gly Val His Lys Arg Tyr Phe Arg Xaa  
1 5 10 15

<210> 121  
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109030-03060

$\langle 220 \rangle$ 

<223> Description of Artificial Sequence:Synthetic Peptide

<400> 121

Cys Lys Ile Thr Glu Lys Gln Leu Leu Gly Asn Val Leu Asn Tyr Pro  
1 5 10 15

1 / 101

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